Excavations at an early church site at Struell Wells, Co. Down

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Finbar McCormick and Emily Murray

Introduction

Struell Wells, near Downpatrick, Co. Down (Fig. 7.1), has the most extensive set of buildings attached to a holy well site in Ireland (Fig. 7.2). The wells are associated with St Patrick and were a focus of pilgrimage from at least the twelfth century. The buildings include the ruins of an eighteenth-century church reputedly built on the site of an earlier medieval church. In the summer of 2012 a research excavation and geophysical survey were conducted to try and uncover remains of this early church and other evidence of medieval and possibly pre-Christian activity. The early church was not located but a burial horizon uncovered inside the ruins of the post-medieval church supports the probability of the location of an earlier church close by. The burials have been radiocarbon-dated to the mid-eleventh to mid-twelfth century AD and overlay an extensive 'burnt mound'-type deposit of charcoal and burnt stones. This material is generally interpreted as deriving from the heating of water, for use for cooking or bathing, or to generate steam for a sauna, and the majority of such sites date from the late prehistoric period. Unfortunately, multiple radiocarbon dates returned from this deposit are confused and range from the late Neolithic through to the twentieth century. This essay presents the results of the recent investigations as well as an overview of the buildings.

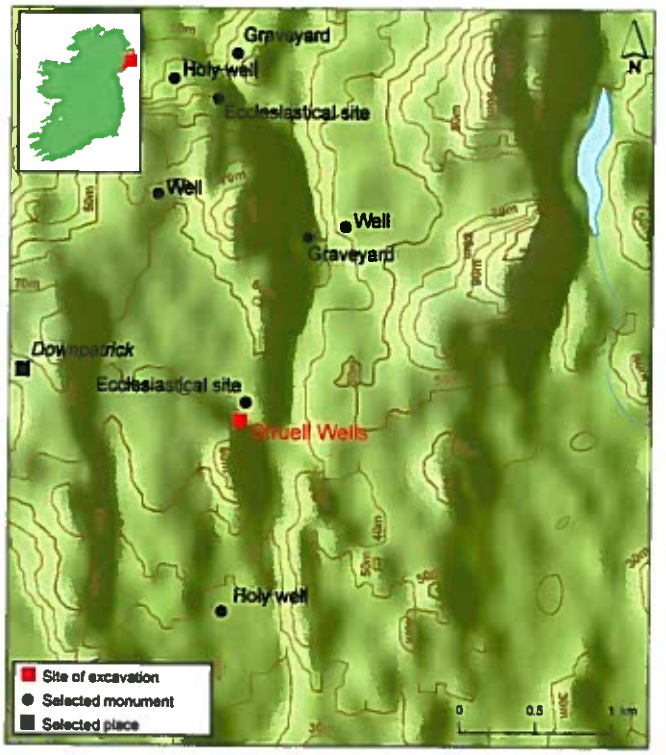

Fig. 7.1—Struell Wells: location map.

The site

Struell Wells (NI SMR DOW 038:002) is a complex of stone buildings—the Drinking Well, the Eye Well, two bathhouses (men's and women's) and an eighteenth-century church (ruinous)—on relatively flat ground in a small, narrow valley through which a stream, *An tSruthail*, flows. There was also a series of cairns associated with the pilgrimage rituals, but these have now been removed. On the steep slopes of the hill to the south of the site are natural rock outcrops known as St Patrick's Chair, while to the north and south-east of the main complex are the footings and ruins of eighteenth-/nineteenth-century cottages (Fig. 7.2). The wells and bathhouses, enclosed by a nineteenth-century wall, together with the church, are owned by the NIEA and have been in state care since 1936. The Chair is on land belonging to Down District Council.

Struell Wells was the focus of pilgrimage throughout the medieval period and into the nineteenth century. The pilgrimages were centred on midsummer, in particular St John's Eve, rather than on the feast-day of St Patrick. The church took an active part in the pilgrimages and proceedings at Struell up to the eighteenth century, but by the early nineteenth century the church had turned away from the site and its apparently pagan proclivities, which included naked bathing. Formal pilgrimages, however, continued until the 1860s, and people continue to visit the wells to get bottles of holy water for cures (McCormick 2011, 24–35).

The earliest reference to the wells is in a hymn or poem to St Patrick attributed to St Fiacc and dated to the eighth century but which survives in an eleventh- or twelfth-century compilation, the *Liber Hymnorum* (McCormick 2009, 56–7). The sources refer to the saint singing psalms in the well and resting on a stone seat by night. A seventeenth-century source (see below) notes that Patrick was 'stark naked' while singing his psalms in the well and it is undoubtedly because of this that pilgrims also found it necessary to be naked when bathing in the wells. A gloss in the *Liber Hymnorum* indicates

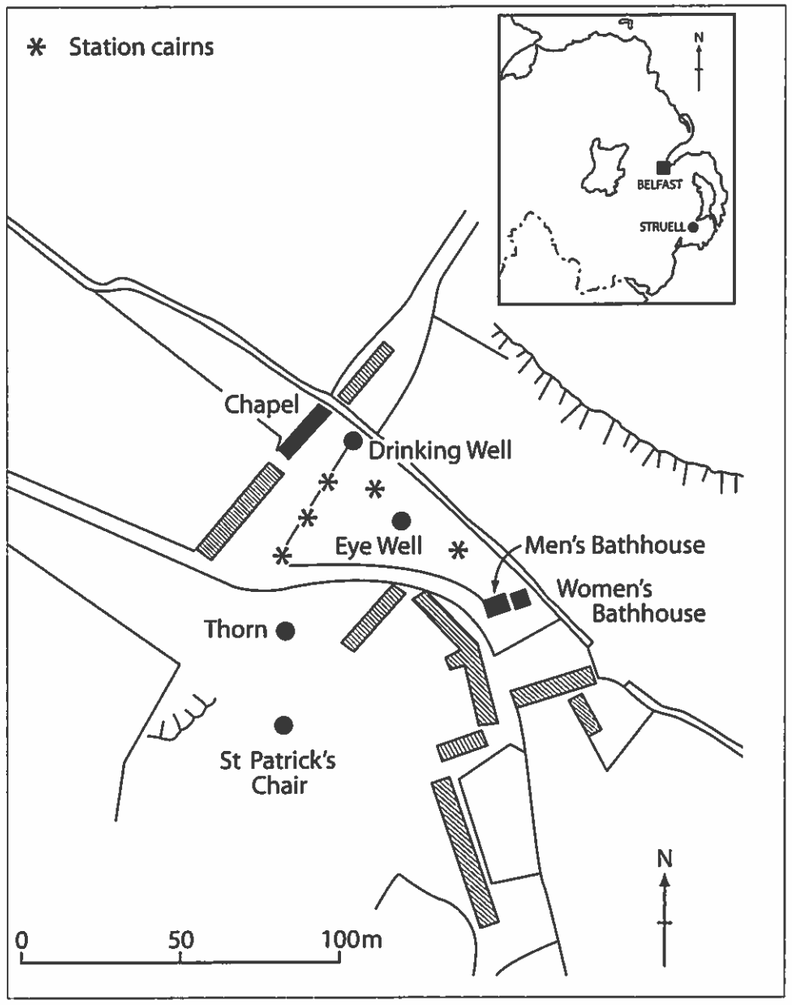

Fig. 7.2—Struell Wells: map showing location and schematic plan showing main features. The hachured boxes mark the locations of the eighteenth-/nineteenth-century buildings.

that pilgrimage to the site was already controversial in the eleventh and twelfth centuries, noting that 'the Ulaid filled it [the well] in because of the troublesome crowds going out to it' (Stokes and Strachan 1903, 315). It is highly likely, however, that the midsummer bathing was pagan in origin. St Caesarius of Arles (d. 542), for instance, condemned such practices, stating: 'let no one on the feast of St John dare to bathe in the fountains or marshes or rivers either at night or early in the morning; that wretched custom still remains from pagan observances' (Mueller 1965, 167–8).

The buildings

The Drinking Well is considered the main well and the one principally associated with St Patrick. MacCana, writing in 1643 about Struell, referred to 'the ruins of a chapel' and, between it and the bathhouse, a 'fountain ... artificially enclosed with stone, which is commonly called the Tub ... In this tub the holy man, our Patrick ... used to spend a great part of the night, stark naked, singing psalms and spiritual songs' (Reeves 1854, 52–3). The Drinking Well is roughly oval in plan and is enclosed with a corbelled roof—thus lending itself to the appellation of 'the tub'. The wickerwork impressions on the internal mortar of the corbelled roof suggest a later medieval date for the construction of the present building (McCormick 2009, 46). The single doorway, on the eastern side, has fragments of carved sandstone mouldings of a

thirteenth- to fifteenth-century date (*ibid.*). It is unclear whether these are original to the building. This is the only true spring well at Struell (*ibid.*, 53; Jope 1966, 310).

Towards the centre of the site is the Eye Well. This is a small, rectangular building with a corbelled stone roof. It is fed by an inflow culvert from the Drinking Well and is probably eighteenth-century in date (McCormick 2009, 47). Further south are the two bathhouses. The women's bathhouse is a rectangular building, now unroofed. Inside there is a spout built into the northern gable wall that continuously streams water fed by an inflow culvert from the stream. Carved sandstone mouldings also survive in the women's bathhouse and, like those in the Drinking Well, they can be dated to sometime between the thirteenth and fifteenth centuries (McCormick 2009, 48). West of and set at right angles to the women's bathhouse is the largest building on the site, the men's bathhouse. This has three rooms: one with benches that functioned as a changing room; a second, interconnected room with a large sunken bath and steps down into it; and a third, outer room with a separate entrance opposite the ladies' bathhouse and which functioned as a changing room for the latter. The construction of the men's bathhouse has been attributed to Lady Elizabeth Cromwell and has been dated to *c.* 1700 (*ibid.*, 50).

North of the Drinking Well are the unroofed walls of a plain, rectangular-plan post-medieval church that evidently replaced an earlier medieval church. Physical evidence for the presence of an older church is provided by fragments of two medieval carved stone windows, which were recovered during DoE works at the site in the early 1960s and were built into the boundary wall adjacent to the Drinking Well (see McCormick 2009, fig. 12). Set into the external face of the north wall of the Drinking Well is a stone with a simple incised cross, possibly early medieval, that was found between the church and the well during 'improvements' at the site in the 1920s (McCormick 2011, 7). Human remains were also reportedly found in this area at the time (McCormick 2009, 53). These discoveries support the probability that an early church was located in the vicinity of the post-medieval church. The existence of the church is indicated by the 1306 record of taxation that shows that Struell was then a separate parish—it therefore seems probable that it had a church (*ibid.*, 51).

The theory of the existence of an older, smaller church is reinforced by Harris (1744, 25), who, writing about Struell in the mid-eighteenth century, recorded the presence of 'the ruins of a small chappel [*sic*] dedicated to St Patrick'. O'Laverty (1878, 248) stated that this church was repaired in 1750 but the present ruin is clearly all of one build. The post-medieval church has a north-east–south-west orientation, while it would be expected that a medieval church would have been built on an east–west axis. As it stands, it has two entrances—one in the western gable and one midway along the southern side wall. The eastern gable wall is missing and the two side walls end just to the west of the stream. Given that the entrance in the long axis would have been in the centre of the wall, it is clear that the eastern end of the building straddled the stream, although it is now missing. Both O'Laverty (1878, 246) and the OS memoirs (Day and McWilliams 1992, 50) record that the building was never finished owing to local Protestant opposition. The extant remains are important, as they appear to be one of the earliest surviving Mass-house structures in Ulster. The altar would have been centred on the long axis of the north-west wall, which has no window openings. A third door would also have been expected in the missing gable wall. The windows and doors are plain square openings with no architectural features. This is very much in keeping with contemporary Presbyterian meeting houses, which provided a template for eighteenth-century Mass-houses. Plain rectangular 'secular' door and window openings are, for instance, present in the early eighteenth-century Non-Subscribing Presbyterian church in nearby Downpatrick (Jope 1966).

The 2012 investigations

Recent research on Struell by one of the authors (McCormick 2009; 2011), together with the rediscovery of St Patrick's Chair, long hidden in dense overgrowth, has led to renewed interest in Struell. There have also been various initiatives to increase the profile of Ulster sites associated with St Patrick in order to enhance their tourist potential. The NIEA-funded geophysical survey and excavation at the site, which took place in May and June 2012, were a further contribution to this process.

The survey

The geophysical survey (electrical earth resistance)[1] was conducted over an area of approximately 0.36ha. Its main objectives were to determine the layout and extent of the subterranean culvert system that transports water to and from the wells and bathhouses, and to locate the remains of earlier church foundations.

Both high- and low-resistance anomalies of interest were detected (Fig. 7.3) and, as might be expected, many appear to be related to the more recent activity at the site. These include the footings of stone buildings immediately south of the church (an eighteenth/nineteenth-century building shown on nineteenth-century OS maps), relict paths (between the church and the Drinking Well) and tumble and rubble

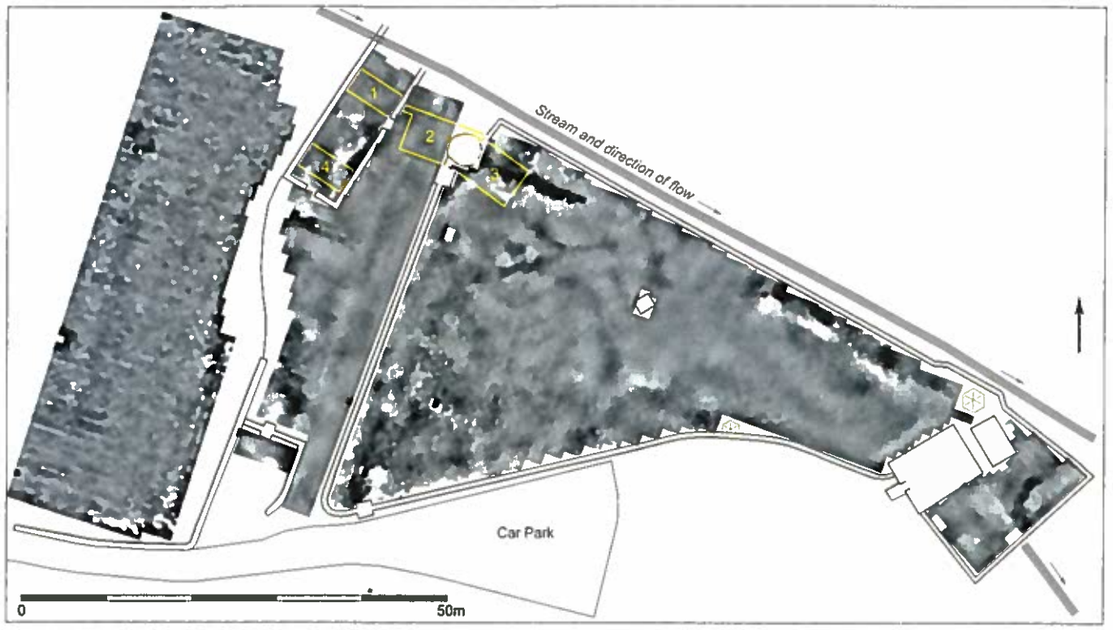

Fig. 7.3—Struell Wells: shade plot of electrical resistance data following application of high-pass filter. Locations of excavation trenches also shown—trenches 2 and 3 on either side of Drinking Well; trenches 1 and 4 within ruins of church.

associated with the construction of the road and field walls.

No obvious walls or outlines of a potential church building were detected. Within the church ruins, at the southern end, was an area of mixed high- and low-level resistance, not readily decipherable. The most obvious signature detected in the survey was a high-resistance linear anomaly running westwards from the Drinking Well. This, coupled with other linear and curvilinear high-resistance anomalies to either side of the bathhouses, can be interpreted as imaging below-ground culverts and drains. The creation of the bathhouses, both of which contain spouting fountains, would have necessitated a complex manipulation of the waters flowing from the stream and wells using such culverts. Additionally, the area is prone to flooding and some of the geophysical anomalies may represent drains built to address this challenge.

The excavation

Excavation trenches were located in and around the church ruins to try and find the foundations of the early church thought to be located on the same site. Trenches were also opened adjacent to the Drinking Well, probably the original well of the site, to try and locate surviving early medieval and possible pre-Christian features associated with it. Four trenches were excavated (Fig. 7.3)—two inside the church (trenches 1 and 4) and one on each side of the Drinking Well (trenches 2 and 3).

In addition to the excavation of the four trenches, the interior of the Drinking Well was cleared out. A water-pump was used to try and drain the well but it was found that it filled up as quickly as the pump drained it. The fill of the well was lifted out by bucketfuls and sieved in the adjacent river. The majority of the finds were coins and in an advanced stage of corrosion. Most (116; 95%) were of sterling and ranged in date from 1955 to 2009. Other finds included pieces of broken glass, bottle tops and ring-pulls, along with modern, imported red quartz gravel. The presence of the exclusively modern collection of finds indicates that the well must have been cleared out on at least one occasion relatively recently.

Trenches inside the church

Trench 1 was opened inside the church at the eastern end, immediately inside and to the east of the southern entrance, and extended across the full width of the church (approx.

6.16m by 3m). A series of horizons of build-up and dumped stone were uncovered, which for the most part yielded sherds of post-medieval pottery (including Scottish spongeware, Castle Espie ware, creamwares and earthenwares). The main stone layer uncovered was found to extend under the walls of the church, suggesting that the material was laid down to provide a firm, dry footing for the church. In addition to the post-medieval finds, and in increasing frequency with depth, a number of sherds of early medieval Souterrain Ware were recovered (approx. 40). Although these were clearly residual, as they were found alongside glazed wares, they do provide evidence for early medieval activity; the emergence of Souterrain Ware in Ulster has been dated to *c.* 700, possibly continuing to as late as the early fourteenth century (McSparron *et al.* 2009, 136–8). Trench 1 was excavated down to a depth of 60cm below the modern surface, where the water-table was reached and excavation ceased.

Trench 4 (6.15m by 3m) was opened at the opposite end of the church, 2m east of the south-western gable wall, and contained the same upper sequence of deposits as trench 1. A box section (3m by 1.5m) opened at the southern end of the trench exposed a charcoal-flecked clay loam below the stony dump layer (55cm below the sod). Within this deposit were poorly preserved discrete 'samples' of disarticulated human remains, while at the southern edge of the box trench were the partial remains of *in situ* articulated skeletons, orientated east–west and running into the north-facing baulk. The best-preserved skeleton was represented by the left femur, the proximal end of the left tibia and bones of the left hand. The other skeletons were represented by long-bones aligned on the same orientation but all were poorly preserved.

The articulated remains were found at the base of the clay loam layer and were sitting on the surface of an intense black gritty loam with burnt orange/red stones throughout. No artefacts were recovered from this horizon, nor were any found in association with the skeletons in the overlying deposit. Excavation through this deposit revealed a large angular stone and boulder layer. The stones were sitting on, and pressed into, a sticky blue-grey clay, possibly the natural subsoil. The water-table was reached at this depth (90cm below the modern surface) and excavation within the trench ceased.

Trenches excavated on either side of the Drinking Well

Trench 2 (5m by 5.5m) was opened on the northern side of the Drinking Well and immediately south of the church. It was opened primarily to locate any earlier building remains associated with the well but also in the hope of uncovering early church remains.

Removal of the sod revealed a shallow, loose gravel layer that overlay a compacted angular stone deposit. These represent different metalled surfaces of a path or roadway that aligns with a small bridge over the stream, leading to the cottages on the opposite side. The gravel layers just below the sod probably date from an earlier phase of presentation of the site when in state care. These metalled or compacted stony surfaces were built above an extensive stone deposit that was also found to extend under the church walls (the same stony dump layer found in trenches 1 and 4 inside the church, above which the church walls were built). Sections excavated through this material showed that it lay above a clay loam that produced a human tooth and a fragment of human bone, but no other artefacts or datable materials. Below this was a clay horizon with red/orange burnt stones and charcoal, which increased in thickness from the northern edge of the trench towards the well. Beneath this again was a voided large angular stone and boulder deposit with the stones impressed into an underlying clay deposit. The water-table was reached at a depth of approximately 60cm.

Immediately adjacent to the Drinking Well, and below the extensive stone build-up (which continues under the wall of the church), were a series of ill-defined stone and clay deposits abutting the well. The interpretation of these is that the well wall was built at a lower level and then buttressed up externally with dumped material. Immediately west of the well, a linear stone feature, a wall or revetment, was exposed in plan and partially in section (24cm in height). This appeared to be contemporary with the well's construction, though only a short section (approx. 2.2m) of it was revealed and further investigation will be required to identify its full form and function. In the south-eastern corner, a stony, 'flagged' and cobbled surface leading to the well entrance was uncovered; this proved to be a continuation of a cobbled path revealed south of the boundary wall in trench 3 (see below).

Trench 3 (5m by 5m) was opened immediately south of the Drinking Well. The stone-built drain clearly detected in the survey was uncovered (Figs 7.4 and 7.5). It measured 50cm in width and height externally and was capped with large, angular, relatively flat stones. When fully exposed, a couple of the capstones at the southern end of the trench were lifted, revealing that the interior of the drain (44cm in width and 35cm in height) had been pointed and lined in concrete and that clear water, emanating from the Drinking Well, flowed southwards through it. The heterogeneous deposits to the west of the drain comprised a series of recently dumped materials, with large pieces of modern ceramic drainpipes, complete wine bottles and other rubbish. The concrete pointing of the drain, the loose make-up of the soil and the presence of

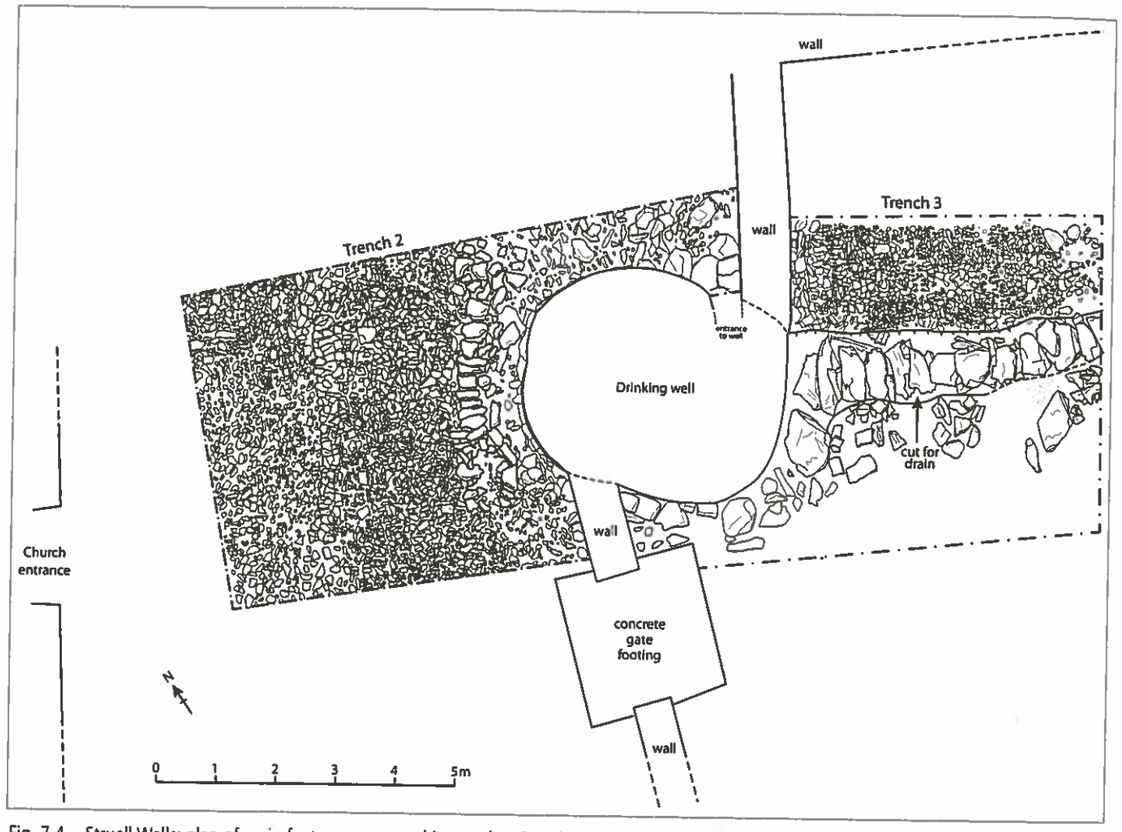

Fig. 7.4—Struell Wells: plan of main features excavated in trenches 2 and 3 to either side of Drinking Well.

modern rubbish throughout, in particular fragments of the same modern ceramic ridged drainpipe, suggest that a large area west of the drain was also dug away sometime in the last century, by hand or machine. Perhaps the area had become waterlogged and boggy owing to the blockage of the drain. A box section was opened through this material perpendicular to the drain. Below the modern dump layer was a thin, blackish-brown clay layer that overlay a sticky waterlogged clay abutting the external side wall of the drain. No positive cut for the drain through the clay was identified. The ground, however, was waterlogged (the water-table was reached at a depth of 70cm) and the presence or absence of a cut could not be determined with certainty.

To the east of the drain a cobbled stony surface measuring 1.6m in width extended westwards from the eastern edge of the trench across the full length of the trench, 4.3m north–south. The cobbling had a relatively even surface, with three east–west linear gullies or depressions. This continues into trench 2 and represents an old path leading to the entrance of the Drinking Well.

Radiocarbon dates

Multiple bulk samples of the 'burnt mound' material in trench 4 inside the church were retained and processed in the laboratory at QUB. The majority of the charcoal that was floated off was finely particulated, with very few single-entity pieces suitable for radiocarbon dating. Two of the larger fragments of charcoal recovered from the bulk samples were submitted for dating to the ^{14}CHRONO laboratory at QUB.

Fig. 7.5 (opposite page)—Struell Wells: trench 3, showing stone-lined drain leading from Drinking Well and cobbled path.

Both returned radiocarbon ages that place them in the late Neolithic: 3848±34 BP, which calibrates at the 2-sigma range (95.4%) to cal. BC 2459–2205 (UBA-22718), and 4000±41 BP (UBA-22825), which calibrates at the 2-sigma range (95.4%) to cal. BC 2831–2352. The samples may derive from the heartwood of a potentially long-lived specimen (such as oak) and therefore provide a date centuries older than when the tree was actually felled, creating an 'old wood effect' (Lanting and Brindley 1991, 26). Even if this is the case, the possible error would still only be on a scale of centuries rather than millennia. These results contrast with the radiocarbon dates returned for two twigs from the same context. During the excavation of the burnt layer, a distinct cluster of charred twigs was noted at the base of the deposit and was sampled separately. This comprised a collection of short-lived twigs (15–17 years old), identified as ash (*Fraxinus* sp.) by David Brown (QUB). One of these returned a radiocarbon age of 613±27 BP, which calibrates, at the 2-sigma range (95.4%), to cal. AD 1296–1400 (UBA-22403), and the second a date of 121±28 BP, which calibrates, at the 2-sigma range (95.4%), to cal. AD 1680–1953 (UBA-22777).

In addition to the samples of charcoal from the burnt horizon, a sample of human bone (fragment of femur) from one of the articulated skeletons (SK4009) was submitted for radiocarbon dating. This returned a radiocarbon age of 945±29 BP, which calibrates at the 2-sigma range (95.4%) to cal. AD 1025–1156 (UBA-22411). A second sample of human bone was submitted but had insufficient collagen to allow analysis.

The date returned for the skeleton is several centuries older than that returned for the ash twigs, which were stratified below it. Meanwhile, the samples of charcoal recovered from the same deposit as the twigs, but not necessarily of short-lived specimens, are millennia older. Even given the possibility of the old wood effect, for which there is no general 'correction factor' (Lanting and Brindley 1991, 26), the margin of error would only push the date a few centuries earlier. At best, the radiocarbon results for the charcoal provide a *terminus post quem* for activity at the site and a maximum date range, though the picture is far from clear.

Discussion

Early structural remains: the church and the Drinking Well

One of the objectives of the 2012 excavations was to locate the foundations of the early church. No positive structural remains of a church were encountered, but the presence of burials, *in situ*, suggests that the earlier church building was probably located in the vicinity of the present ruinous church, possibly further west. The discovery of human remains was recorded during the course of repair work in the 1920s (McCormick 2009, 53), while human bones were also sometimes unearthed during ploughing in recent years, which has led to a local tradition of a graveyard lying immediately north-west of the ruined church (*ibid.*).

The other aim of the excavation was to determine whether there were any earlier structural remains or other features associated with the Drinking Well, which documentary evidence suggests is the original and primary well of the site. In trench 3, south of the well, modern disturbance indicates that few (if any) early remains survive. In trench 2, north of the well, the picture is more complicated, with various linear arrangements of stones and flags uncovered. The main feature of any consequence was the stone-built wall or revetment at the eastern edge of the trench, which appeared to be contemporary with the well. As only a small area of this feature was exposed, it is not possible to determine its form or function. In the geophysical survey plots (Fig. 7.3) there is a faint linear high-resistance anomaly in this location, which may be imaging the same feature partly uncovered in the excavation trench. Interestingly, both linears are on an approximate east–west orientation (west-north-west/east-south-east). Further excavations will be required to determine the full extent of this feature.

The 'burnt mound' material: continuity of use of the site from the prehistoric period?

The heat-shattered stones and charcoal are the typical characteristics of burnt mounds or *fulachta fiadh*, widely recorded from sites across Ireland and elsewhere in Europe (Ó Néill 2003–4, 82; Barfield and Hodder 1987, 370). The associated apparatus—hearths, pits dug in the ground and wooden or stone troughs or basins—are only occasionally found (Ó Néill 2003–4, 83). This site type is commonly located in proximity to water and is typically devoid of artefacts, including food debris, and generally lacks settlement evidence (Barfield and Hodder 1987, 371), all of which is consistent with the evidence from Struell.

The interpretation of these burnt mounds is that stones, heated in a fire, are placed in water to boil it, thereby producing heated water for cooking or bathing or, if contained by a structure of some sort, steam and potential use as a 'sauna'. There has been much discussion about burnt mounds and whether they represent the remains of cooking or bathing (Barfield and Hodder 1987; Ó Drisceoil 1988; Ó Néill 2003–4). Barfield and Hodder (1987) have argued that burnt mounds represent the remains from sweat-houses (saunas) or sweat-bathing of some form, and that the sauna had a ritual function of purification as part of religious practices

and beliefs. The tradition associated with many saunas and sweat-houses, including in Ireland, is that they are accompanied by a cold plunge after leaving the sauna (Barfield and Hodder 1987, 372). At Struell this could have been performed by bathing in the stream or in an early incarnation of the Drinking Well.

Documentary sources from Ireland include a number of accounts that describe the boiling of liquids using heated stones—an activity that would yield the burnt mound material as recorded in the archaeological record (Ó Néill 2003–4). Radiocarbon analyses of burnt mounds from Ireland show, however, that few (less than 5%) are contemporary with these historical descriptions, a pattern also recorded in Scotland, England and Scandinavia (*ibid.*, 83). The majority of the burnt mound sites in Ireland date from the second millennium BC, with a peak age range of 1600–1400 BC. Many also date from earlier and extend back into the third millennium BC, with which the Struell dates can be compared (*ibid.*).

The radiocarbon dates returned for Struell, if the Neolithic dates are representative (ignoring the dates for the twigs), indicate a substantial hiatus of thousands of years between the burnt mound and the skeletons that were found directly overlying this horizon. The twigs retrieved from the base of the burnt material and which returned modern dates also highlight issues of stratification and the probability of the reworking of the burnt mound layer.

Conclusion

What is clear from the excavation and survey is that the areas around the well and at the northern end of the site contain a large amount of redeposited material, with some evidence for the removal of material as well as redeposition. It would seem that the site was originally a wet, marshy area that was reclaimed and levelled up by the addition of dumped material for the construction of the well in medieval times. Included in this redeposited material were quantities of burnt mound material, Souterrain Ware and even a prehistoric flint thumb-scraper (found in trench 2). It would also seem that this reclamation of the area was a continuous affair, encompassing a large degree of soil disturbance, because early medieval and relatively modern material were often found adjacent to each other.

There was clearly early medieval activity in the area, as evidenced by the presence of Souterrain Ware. Unfortunately, this pottery is difficult to date precisely, as it remained in use for several centuries from the eighth century (Baillie 1986, 106). It may have been in use in the eleventh/twelfth century and could therefore be contemporary with the burial evidence. It is interesting that the earliest evidence for pilgrimage to Struell also dates from this period, although the *Liber Hymnorum* gloss, recording the infilling of the well, would suggest that the pilgrimage had been in existence for some time before then.

The limited excavation at Struell provided tantalising evidence for activity at the site in pre-Christian times, but too early to indicate continuity of use. The excavation was hampered by the fact that the water-table was quite close to the surface and, furthermore, the excavation occurred mainly during the wettest June for more than a century. In places it was not possible to establish whether natural levels had been reached. It is intended that another season of excavation will be undertaken, when, hopefully, many of the problems that arose during the first season, especially in the case of the confusing radiocarbon dates, will be resolved.

Acknowledgements

Our main thanks go to the QUB undergraduate students who excavated the site, often working in extremely wet conditions. The excavation was directed by Emily Murray and Finbar McCormick under a joint licence (AE/12/60), supported by members of the CAF (Sarah Gormley and Ruairí Ó Baoill). Sapphire Mussen (CAF) conducted the geophysical survey, assisted on site by Stuart Alexander (CAF) and Grace McAlister (CAF). The excavation was financially supported by the Northern Ireland Environmental Agency (NIEA) with permission from the landowners (Mr and Mrs Turley, Down District Council and the NIEA). The drawings were prepared by Libby Mulqueeny (QUB). The finds were washed by secondary-school students on placement in the School of GAP, supervised by David Brown. Four students from De La Salle College, Belfast, participated in the excavation during the third week. The charcoal specimens were identified by David Brown (QUB).

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Note

1. The survey was carried out by Sapphire Mussen of the CAF, using a Geoscan RM15 meter and MPX15 multiplexer, and conducted using a traverse interval of 0.5m and a sampling interval of 0.5m.